

## IN THE CLAIMS

1-16. (Cancelled).

17. (Currently Amended) A method for manufacturing a cathode, comprising the steps of:

(A) a step of forming a pair of electrodes on a substrate;

(B) a step of forming a film comprising a polymer so that the film connects the pair of electrodes; and

(C) a step of forming a gap at the film ~~provided between the pair of electrodes~~ and of forming first and second portions including at least one of amorphous carbon and graphite, which are formed by carbonizing the polymer, at a portion of the film facing the gap and in the vicinity of the gap by applying a voltage between the electrodes,

wherein the gap, and the first and second portions are formed substantially simultaneously by applying a voltage between the electrodes, and step (B) comprises a step of forming a film comprising a polymer, first and second portions of the film include at least one of amorphous carbon and graphite, and the wherein the first and second portions of the film are adjacent are adjacent to the gap and oppose one another on opposite sides of the gap.

18. (Previously Presented) A method according to Claim 17, wherein the polymer is an all-aromatic polymer.

19. (Previously Presented) A method according to Claim 17, wherein the polymer is any one of polyimide, polybenzimidazole, polyamideimide, and polyacrylonitrile.

20. (Previously Presented) A method according to Claim 17, wherein the film comprising the polymer further comprises an electroconductive material.

21. (Previously Presented) A method according to Claim 20, wherein the electroconductive material is graphite.

22. (Previously Presented) A method according to Claim 17, wherein the film comprising the polymer is formed by an ink-jet method.

23. (Currently Amended) A method for manufacturing an electron source comprising a plurality of cathodes, wherein the [[said]] cathodes are manufactured by the method according to Claim 17.

24. (Previously Presented) A method for manufacturing an image forming apparatus having an electron source and a light emitting member, wherein said electron source is manufactured by the method according to Claim 23.